

USPN 09/767,150
Art Unit 2661
Amdt September 1, 2005
Reply to Office action of June 1, 2005

Remarks

The prior art cited by the Examiner has been carefully reviewed.

One of the advantages of the invention is that it speeds up the assembly of cells by recognizing that for a particular virtual circuit, much of the information in the header does not change from cell to cell (see page 1, line 16). Thus, a template data structure is constructed which contains the necessary information for a particular VC (see page 5, line 8). The cell data structure also contains a pointer to the circular TDM data buffers to control which TDM channels are to be placed in the cell (see page 2, line 27). In order to assemble a cell, it is only necessary to retrieve the appropriate data structure, insert any variable header data, and insert the TDM data which is controlled by the pointer within the data structure. This indicates which is the next TDM channel for insertion into the cell payload. This scheme results in considerable improvement in the efficiency of constructing cells.

It is not believed that this approach is anticipated or suggested by the prior art references. Shiota discloses a memory 12 containing a table in which pieces of frame/cell connection information are written, but he does not disclose a memory containing partially filled template data structures for each VC such that it is not necessary to assemble each cell in its entirety in accordance with the invention. The economics in part come from associating the data structures with each VC, because it is only within a given VC that part of the contents, as opposed to the overall structure of the cell itself, do not change from cell to cell.

With regard to Saito, clearly in order to construct a cell, it is necessary to know its overall format. It is believed that Saito merely discloses storing the format of each cell. For example, when Saito refers at col. 4, line 8 to the "fixed format" he is clearly not referring to static information that remains the same from cell to cell, but rather the overall structure of each particular type of cell. Each cell still has to be assembled in its entirety.

In summary, neither of the prior art references, either alone or in combination, teaches storing partially filled cells as data structures for each VC, and using these to control the filling of the structures with TDM data.

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It is believed that this application is now in condition for allowance, and reconsideration and allowance are earnestly solicited.

Respectfully submitted,



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